

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-13 (cancelled).

14. (previously presented) An assay for selecting a compound useful for treating epilepsy or other neurological disorders which modulates inactivation of a sodium channel comprising:

- a) an SCN3A nucleic acid sequence which encodes an SCN3A sodium channel or a functional fragment thereof; and
- b) assaying a function of said sodium channel;

wherein a compound is selected when a difference is observed between the inactivation of said sodium channel in the presence of a test agent, as compared to in the absence thereof.

15. (previously presented) The method of claim 14, wherein said SCN3A nucleic acid sequence is a mammalian SCN3A sequence.

16. (previously presented) An assay for selecting a compound useful for treating epilepsy or other neurological disorders which modulates the activity of a sodium channel comprising:

- a) an SCN3A nucleic acid sequence which encodes an SCN3A sodium channel or a functional fragment thereof; and
- b) assaying an activity of said sodium channel;

wherein a compound is selected when a difference is observed between the activity of said sodium channel in the presence of said test agent, as compared to in the absence thereof.

17. (previously presented) The assay of claim 16, wherein said SCN3A nucleic acid sequence is a mammalian SCN3A sequence.
18. (previously presented) The assay of claim 17, wherein said SCN3A nucleic acid sequence is a mammalian SCN3A sequence.
19. (previously presented) The assay of claim 18, wherein said mammalian SCN3A nucleic acid sequence is selected from among mouse, rat and human SCN3A.
20. (previously presented) The assay of claim 19, wherein said mammalian SCN3A nucleic acid sequence is human.
21. (previously presented) The assay of claim 20, wherein said SCN3A nucleic acid sequence is a human sequence comprising SEQ ID NO:400, SEQ ID NO:401, SEQ ID NO: 402, SEQ ID NO: 403, SEQ ID NO: 404, SEQ ID NO: 405, SEQ ID NO: 406 or SEQ ID NO: 407, or an allelic variant thereof, or 95% sequence identity to SEQ ID NO:400, SEQ ID NO:401, SEQ ID NO: 402, SEQ ID NO: 403, SEQ ID NO: 404, SEQ ID NO: 405, SEQ ID NO: 406 or SEQ ID NO: 407.
22. (previously presented) The assay of claim 21, wherein said SCN3A nucleic acid sequence is SEQ ID NO: 65, SEQ ID NO: 66, SEQ ID NO: 69, SEQ ID NO:70, SEQ ID NO: 71, SEQ ID NO: 72, SEQ ID NO:73, SEQ ID NO: 74, SEQ ID NO: 75, SEQ ID NO: 76, SEQ ID NO: 77, SEQ ID NO:78, SEQ ID NO: 79, SEQ ID NO: 80, SEQ ID NO: 81, SEQ ID NO: 82, SEQ ID NO: 83, SEQ ID NO: 84, SEQ ID NO: 85, SEQ ID NO: 86, SEQ ID NO: 87, SEQ ID NO: 88, SEQ ID NO: 89, SEQ ID NO: 90, SEQ ID NO: 91, SEQ ID NO: 92, SEQ ID NO: 93, SEQ ID NO: 94, SEQ ID NO: 95, SEQ ID NO: 96, SEQ ID NO: 97, or SEQ ID NO: 98, or an allelic variant thereof.
23. (previously presented) The assay of claim 21, wherein said sequence has 95% sequence identity to SEQ ID NO:400, SEQ ID NO:401, SEQ ID NO: 402, SEQ ID NO: 403, SEQ ID NO: 404, SEQ ID NO: 405, SEQ ID NO: 406 or SEQ ID NO: 407.

24. (previously presented) The assay of claim 16, wherein said SCN3A nucleic acid sequence encodes an amino acid sequence comprising SEQ ID NO: 67 or SEQ ID NO: 68, or a fragment thereof.
25. (previously presented) The assay of claim 16 wherein said assaying is performed in a cell-free system.
26. (previously presented) The method of claim 16 wherein said assaying is performed with a whole cell.
27. (previously presented) The method of claim 16 wherein said screening assay is a cell-free system.
28. (previously presented) The method of claim 16, wherein said SCN3A sequence is a recombinant form of SCN3A.
29. (previously presented) A method for identifying, from a library of test compounds, a compound having a therapeutic effect on epilepsy or other neurological disorders comprising:
 - a) providing a screening assay which comprises a measurable SCN3A biological activity;
 - b) contacting said screening assay with a test compound; and
 - c) detecting if said test compound modulates said SCN3A biological activity;wherein a test compound which modulates said biological activity is identified as a compound with said therapeutic effect.
30. (previously presented) The method of claim 29, wherein said assay comprises an expression vector comprising an SCN3A nucleic acid sequence which encodes said sodium channel or functional fragment thereof.

31. (previously presented) The method of claim 29, wherein said screening assay is a whole cell system.
32. (previously presented) The method of claim 29, wherein said SCN3A nucleic acid sequence is comprised in an expression vector.
33. (previously presented) The method of claim 32 wherein said expression vector is comprised in a cell.